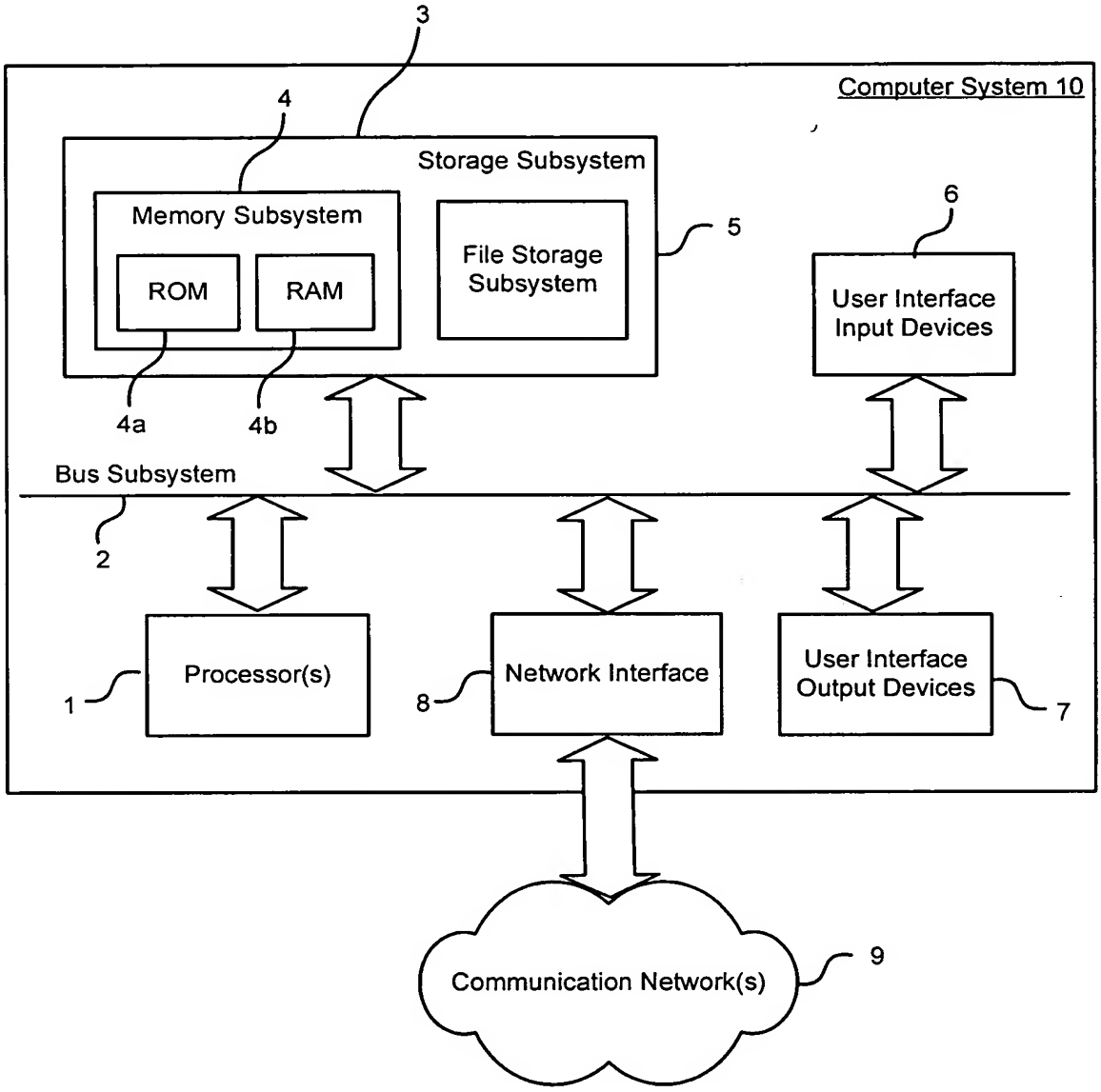
3
Computer System 10
4
Storage Subsystem
Memory Subsystem
ROM
RAM
File Storage Subsystem
5
6
User Interface Input Devices
4a
4b
Bus Subsystem
2
Processor(s)
1
Network Interface
8
User Interface Output Devices
7
Communication Network(s)
9

Fig. 1A

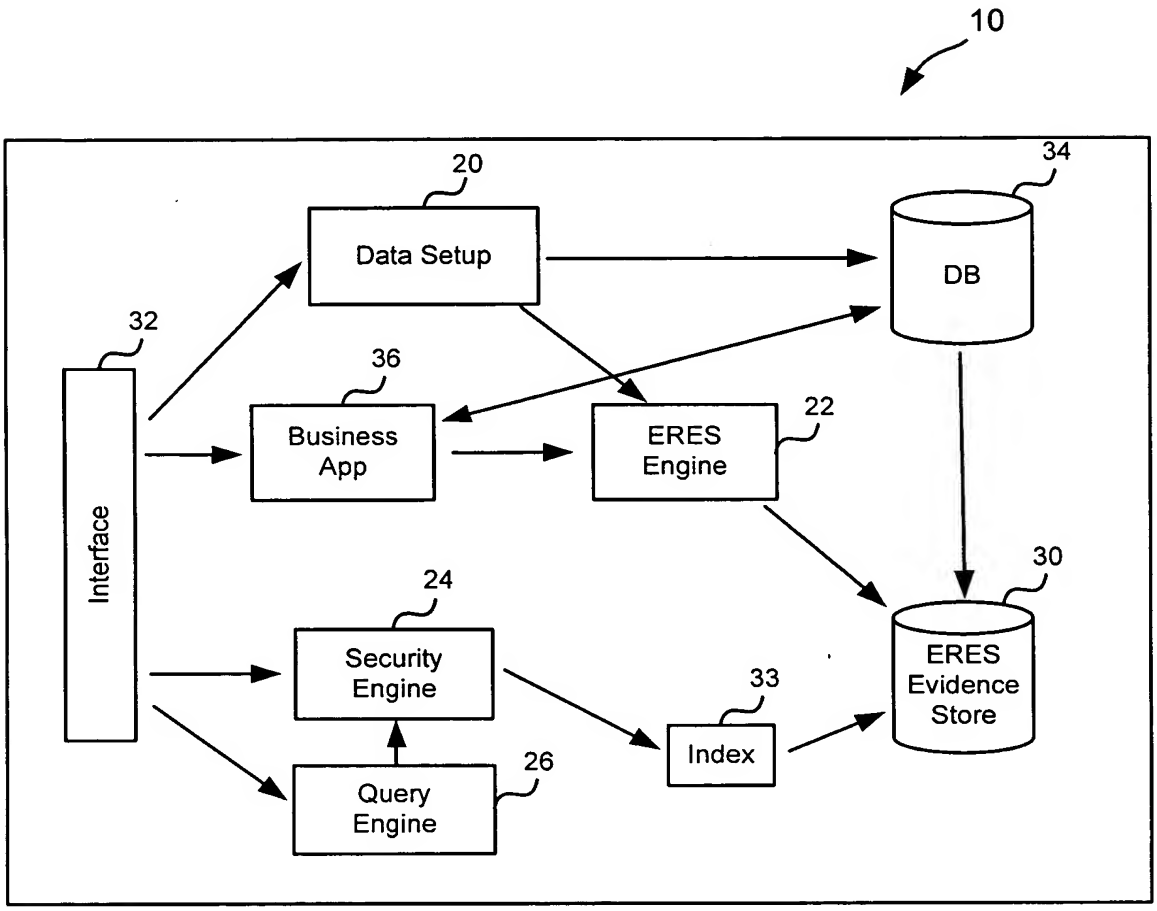
10
20
Data Setup
34
DB
32
Interface
36
Business App
ERES Engine
22
30
24
Security Engine
ERES Evidence Store
33
Index
Query Engine
26

Fig. 1B

30a

Name	Datatype	Length	Mandatory	Comments
DOCUMENT_ID	NUMBER		Yes	Unique document id
PSIG_XML	CLOB	(4000)		XML document
PSIG_DOCUMENT	CLOB	(4000)		Electronic record as seen by user
PSIG_DOCUMENTFORMAT	VARCHAR2	(100)		Format of the Document
PSIG_TIMESTAMP	DATE			Timestamp when the document was requested
PSIG_TIMEZONE	VARCHAR2	(240)		Time Zone the document was initiated
DOCUMENT_REQUESTER	VARCHAR2	(240)		Document requester
PSIG_STATUS	VARCHAR2	(32)		Status of the document (ERROR, PENDING, COMPLETE)
PSIG_SOURCE	VARCHAR2	(32)		Source of the Document
EVENT_NAME	VARCHAR2	(80)		Event associated to the document
EVENT_KEY	VARCHAR2	(240)		Event instance identifier
PRINT_COUNT	NUMBER			Number of time document requested from printing
CREATION_DATE	DATE			WHO Column
CREATED_BY	NUMBER			WHO Column
LAST_UPDATE_DATE	DATE			WHO Column
LAST_UPDATED_BY	NUMBER			WHO Column
LAST_UPDATE_LOGIN	NUMBER			WHO Column

30b

Name	Datatype	Length	Mandatory	Comments
SIGNATURE_ID	NUMBER			Signature ID
DOCUMENT_ID	NUMBER			Document Id Refers EDR_PSIG_DOCUMENTS
EVIDENCE_STORE_ID	NUMBER			Evidence Store Id if the signature are present in Server Tech Storage
USER_NAME	VARCHAR2	(100)		User name who signed the Document
USER_RESPONSE	VARCHAR2	(100)		User Response
SIGNATURE_TIMESTAMP	DATE			Signed Time and Date
SIGNATURE_TIMEZONE	VARCHAR2	(240)		Signature Time Zone
SIGNATURE_STATUS	VARCHAR2	(32)		Signature Status (PENDING, COMPLETE, ERROR)
CREATION_DATE	DATE			WHO Columns
CREATED_BY	NUMBER			WHO Column
LAST_UPDATE_DATE	DATE			WHO Column
LAST_UPDATED_BY	NUMBER			WHO Column
LAST_UPDATE_LOGIN	NUMBER			WHO Column

Fig. 2

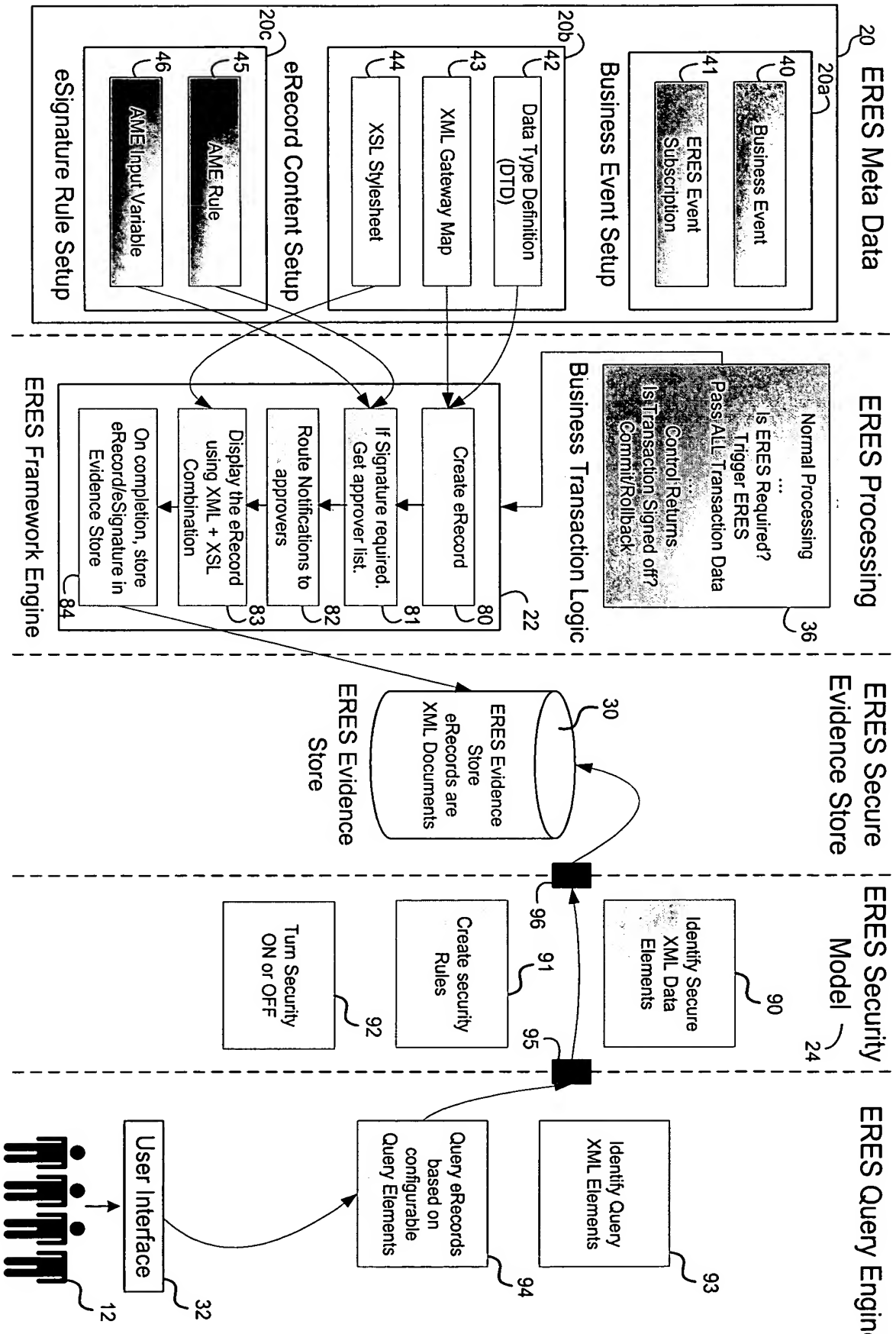
ERES Meta Data
20
20a
Business Event
40
ERES Event Subscription
41
Business Event Setup
20b
Data Type Definition (DTD)
42
XML Gateway Map
43
XSL Stylesheet
44
eRecord Content Setup
20c
AME Rule
45
AME Input Variable
46
eSignature Rule Setup
ERES Processing
Normal Processing
...
Is ERES Required?
Trigger ERES
Pass ALL Transaction Data
...
Control Returns
Is Transaction Signed off?
Commit/Rollback
36
Business Transaction Logic
22
Create eRecord
80
If Signature required. Get approver list.
81
Route Notifications to approvers
82
Display the eRecord using XML + XSL Combination
83
On completion, store eRecord/eSignature in Evidence Store
84
ERES Framework Engine
ERES Secure Evidence Store
30
ERES Evidence Store
eRecords are XML Documents
ERES Evidence Store
ERES Security Model
24
Identify Secure XML Data Elements
90
Create security Rules
91
Turn Security ON or OFF
92
96
95
ERES Query Engine
26
Identify Query XML Elements
93
Query eRecords based on configurable Query Elements
94
User Interface
32
12

Fig. 3

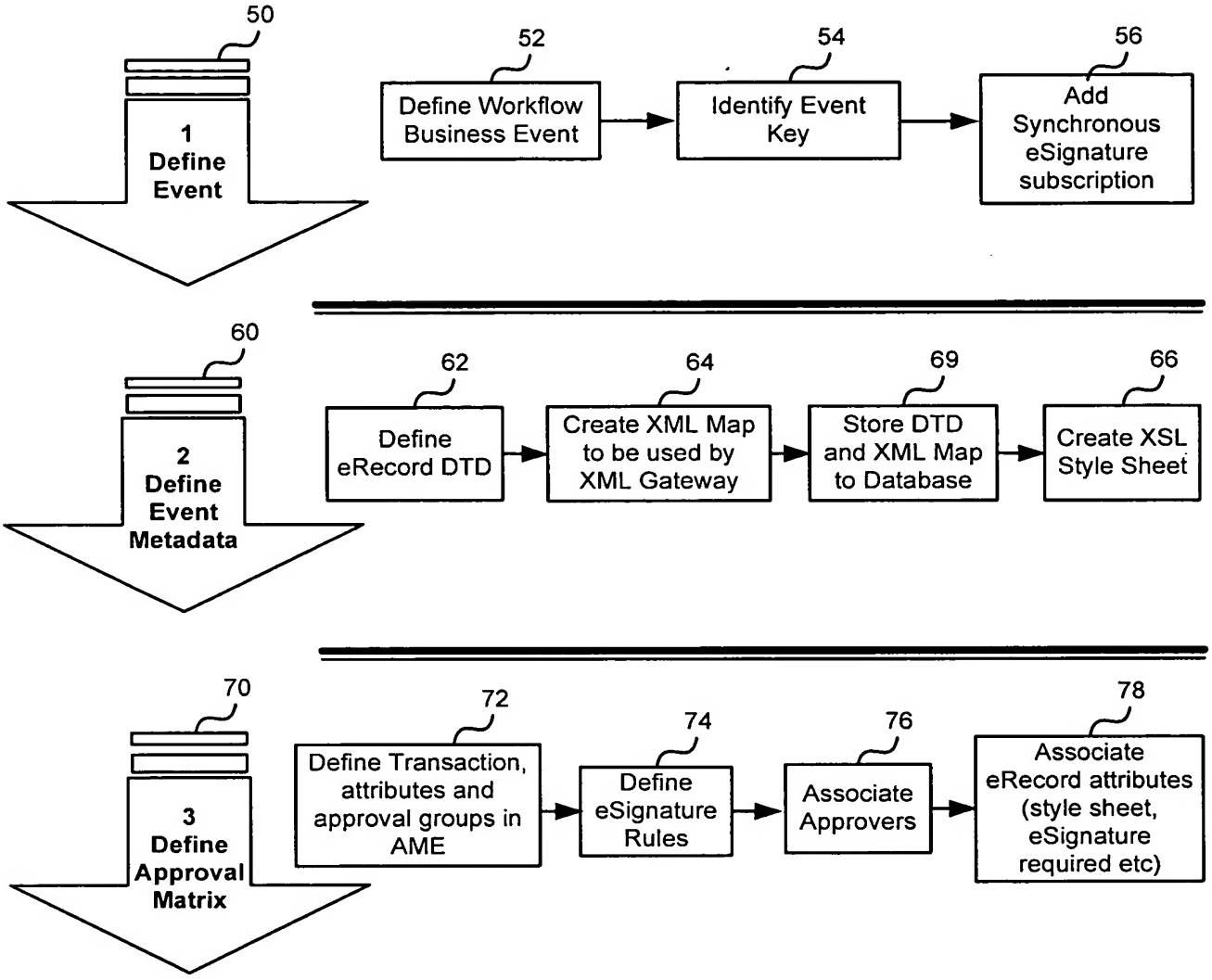
50
1
Define
Event
52
Define Workflow
Business Event
54
Identify Event
Key
56
Add
Synchronous
eSignature
subscription
60
2
Define
Event
Metadata
62
Define
eRecord DTD
64
Create XML Map
to be used by
XML Gateway
69
Store DTD
and XML Map
to Database
66
Create XSL
Style Sheet
70
3
Define
Approval
Matrix
72
Define Transaction,
attributes and
approval groups in
AME
74
Define
eSignature
Rules
76
Associate
Approvers
78
Associate
eRecord attributes
(style sheet,
eSignature
required etc)

Fig. 4

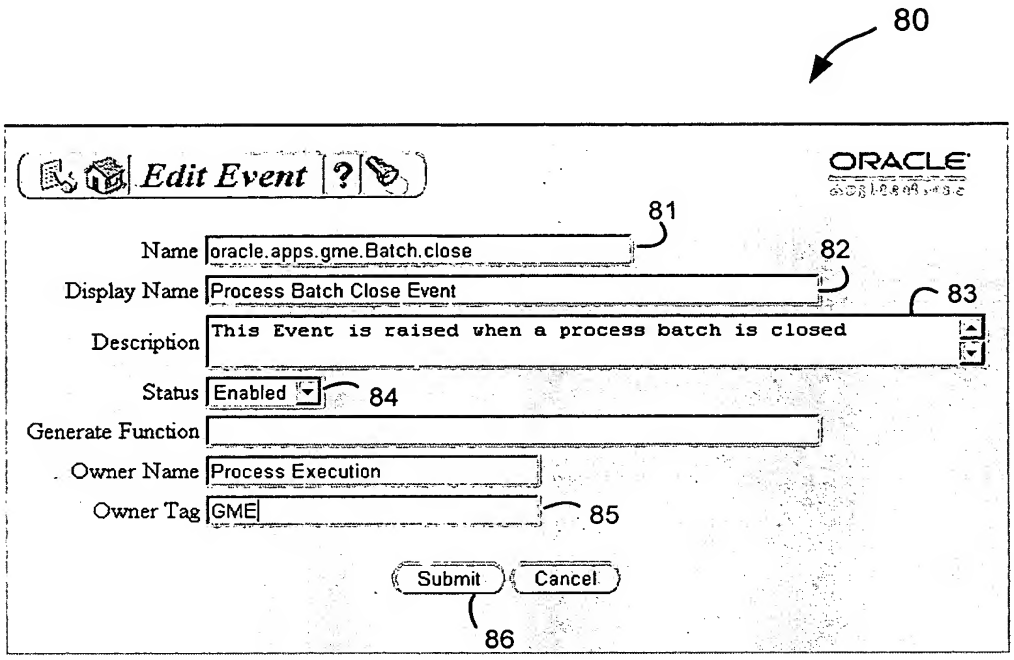

Fig. 5

90

	Rule	Attribute (93)	Approver(s) (94)
91	If PLANT = "Plant 1" And PRODUCT = "Cyanide"	eRecord = Yes eSignature = Yes eRecord Style Sheet = StyleSheet12.X51	James Dunn and Mark Arthur
92	If PLANT = "Plant 1"	eRecord = Yes eSignature = No eRecord Style Sheet = NULL	David Anderson

Fig. 6

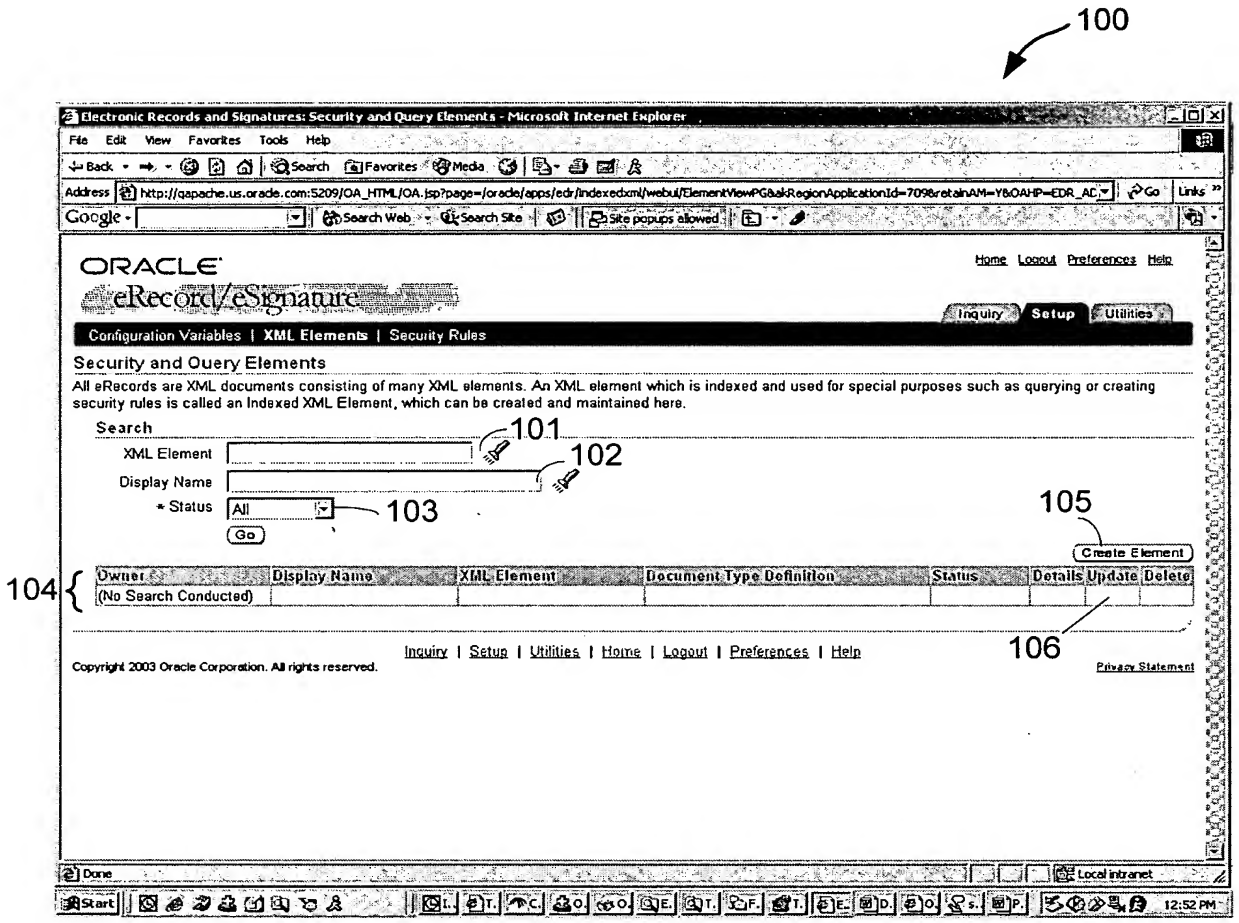
100
Electronic Records and Signatures: Security and Query Elements - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Security and Query Elements
All eRecords are XML documents consisting of many XML elements. An XML element which is indexed and used for special purposes such as querying or creating security rules is called an Indexed XML Element, which can be created and maintained here.
Search
XML Element
Display Name
* Status
All
Go
101
102
103
105
Create Element
104
Owner
Display Name
XML Element
Document Type Definition
Status
Details
Update
Delete
(No Search Conducted)
106
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 7

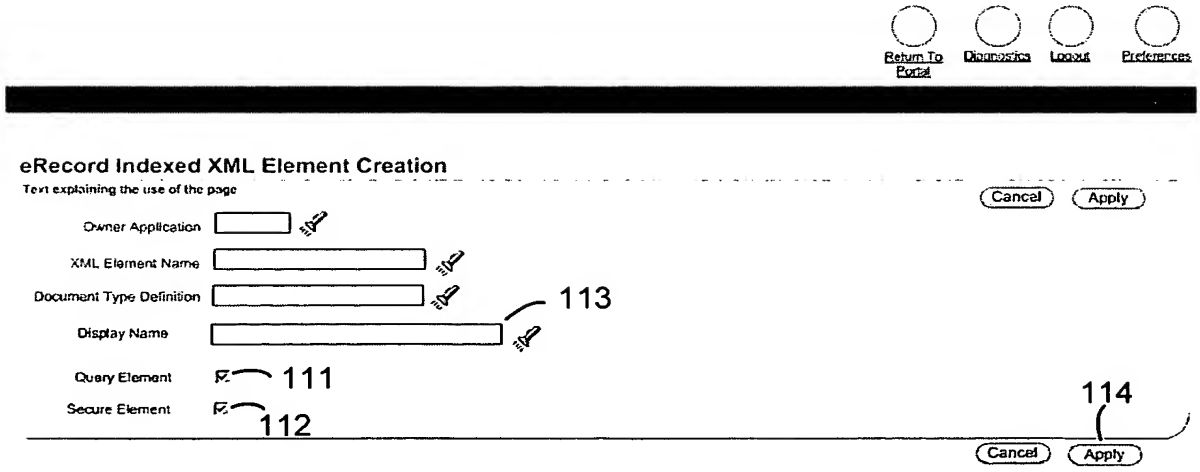
Return To Portal
Diagnostics
Logout
Preferences
eRecord Indexed XML Element Creation
Text explaining the use of the page
Cancel
Apply
Owner Application
XML Element Name
Document Type Definition
Display Name
113
Query Element
111
Secure Element
112
114
Cancel
Apply

Fig. 8

33a

Name	Null?	Type	Description
ELEMENT_ID	NOT NULL	NUMBER	Surrogate Primary Key.
XML_ELEMENT	NOT NULL	VARCHAR2(30)	XML element identified as being searchable
DTD_ROOT_ELEMENT		VARCHAR2(30)	Root element of the XML
APPLICATION_ID	NOT NULL	NUMBER	Application ID of the application owning the query element.
INDEX_SECTION_NAME	NOT NULL	VARCHAR2(30)	Name of the section created in the index for the query element
INDEX_TAG	NOT NULL	VARCHAR2(64)	Tag used to create the section in the index. Unique Constraint.
STATUS	NOT NULL	CHAR(1)	Status of the query element. It can be I(ndexed) or N(ot Indexed).
CREATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
CREATION_DATE	NOT NULL	DATE	Standard WHO column
LAST_UPDATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
LAST_UPDATE_LOGIN		NUMBER(15)	Standard WHO column
LAST_UPDATE_DATE	NOT NULL	DATE	Standard WHO column

33b

Name	Null?	Type	Description
ELEMENT_ID	NOT NULL	NUMBER	Partial Primary key.
LANGUAGE	NOT NULL	VARCHAR2(4)	Partial Primary key. Language used for translatable columns
SOURCE_LANG		VARCHAR2(4)	Source language
DISPLAY_NAME	NOT NULL	VARCHAR2(100)	Display name of the query element. This would be visible to end users.
DESCRIPTION		VARCHAR2(100)	Description of the query element.
CREATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
CREATION_DATE	NOT NULL	DATE	Standard WHO column
LAST_UPDATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
LAST_UPDATE_LOGIN		NUMBER(15)	Standard WHO column
LAST_UPDATE_DATE	NOT NULL	DATE	Standard WHO column

33c

Name	Null?	Type	Description
USAGE_ID	NOT NULL	NUMBER	Surrogate primary key
ELEMENT_ID	NOT NULL	NUMBER	XML element used in creating the security rule.
ELEMENT_USAGE	NOT NULL	CHAR(1)	The usage of the XML element. It can be Q(uery) or S(ecure)
CREATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
CREATION_DATE	NOT NULL	DATE	Standard WHO column
LAST_UPDATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
LAST_UPDATE_LOGIN		NUMBER(15)	Standard WHO column
LAST_UPDATE_DATE	NOT NULL	DATE	Standard WHO column

Fig. 9

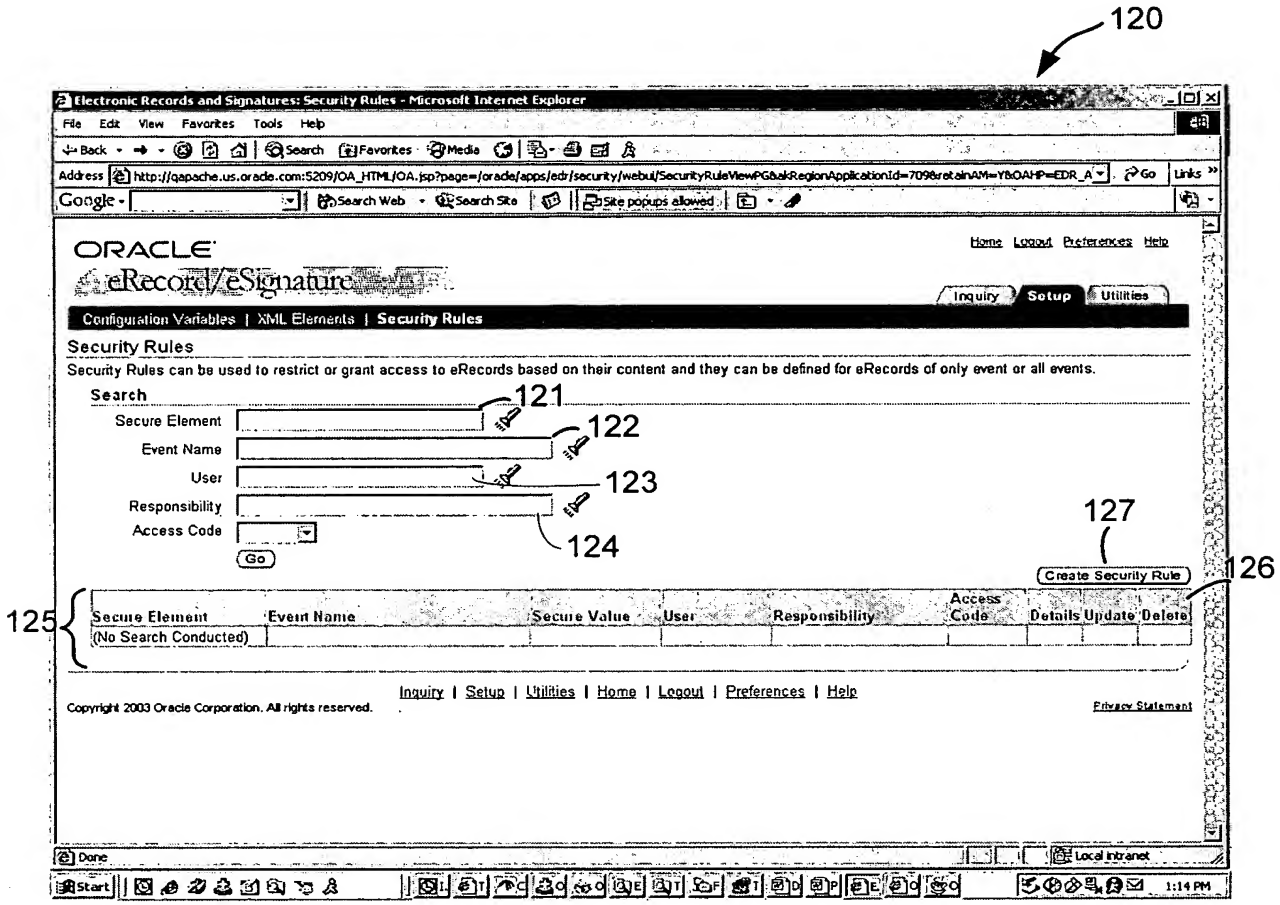

Fig. 10

33d

Name	Null?	Type	Description
RULE_ID	NOT NULL	NUMBER	Surrogate primary key
ELEMENT_ID	NOT NULL	NUMBER	XML element used in creating the security rule.
EVENT_NAME		VARCHAR2(240)	Business event name used in creating the security rule.
SECURE_VALUE	NOT NULL	VARCHAR2(100)	Value secured by the security rule
USER_ID		NUMBER(15)	User ID of the APPS user for whom security is created
RESPONSIBILITY_ID		NUMBER(15)	Responsibility ID of the APPS responsibility for which security is created
ACCESS_CODE	NOT NULL	CHAR(1)	Access code can be G(rant) or R(estrict)
START_DATE	NOT NULL	SYSDATE	Start date for the rule
END_DATE		SYSDATE	End date for the rule
CREATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
CREATION_DATE	NOT NULL	DATE	Standard WHO column
LAST_UPDATED_BY	NOT NULL	NUMBER(15)	Standard WHO column
LAST_UPDATE_LOGIN		NUMBER(15)	Standard WHO column
LAST_UPDATE_DATE	NOT NULL	DATE	Standard WHO column

Fig. 11

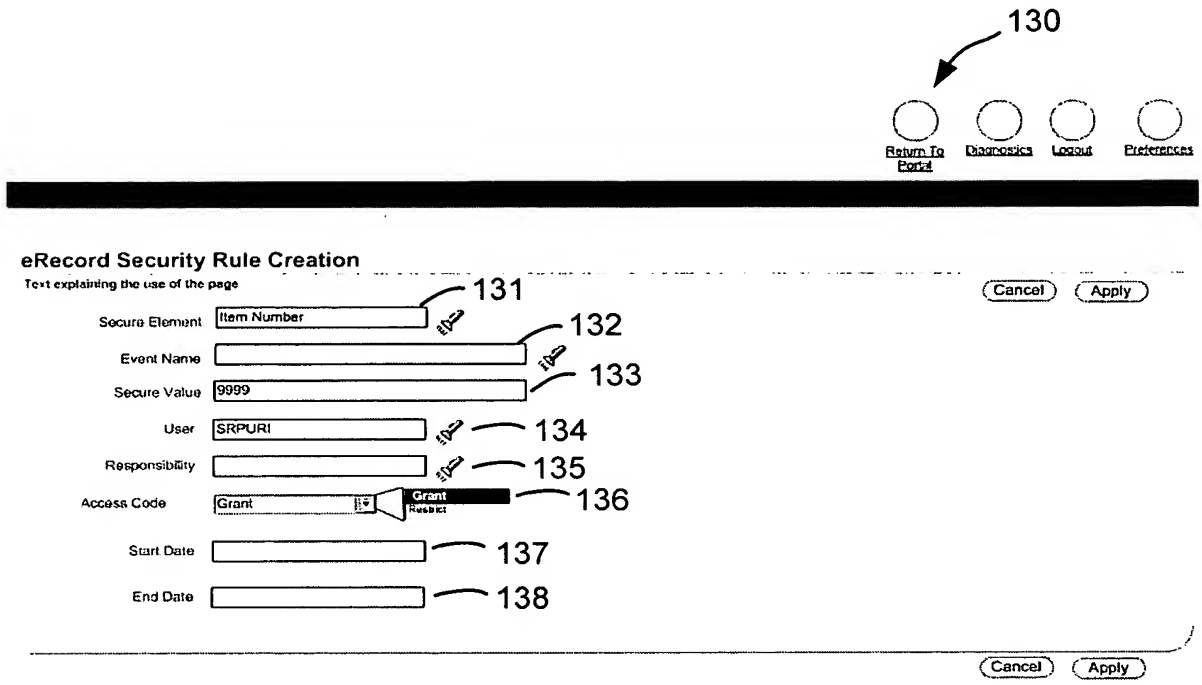
130
Return To Portal
Diagnostics
Logout
Preferences
eRecord Security Rule Creation
Text explaining the use of the page
Cancel
Apply
131
Secure Element
Item Number
132
Event Name
133
Secure Value
9999
134
User
SRPURI
135
Responsibility
136
Access Code
Grant
Grant
Revoke
137
Start Date
138
End Date
Cancel
Apply

Fig. 12

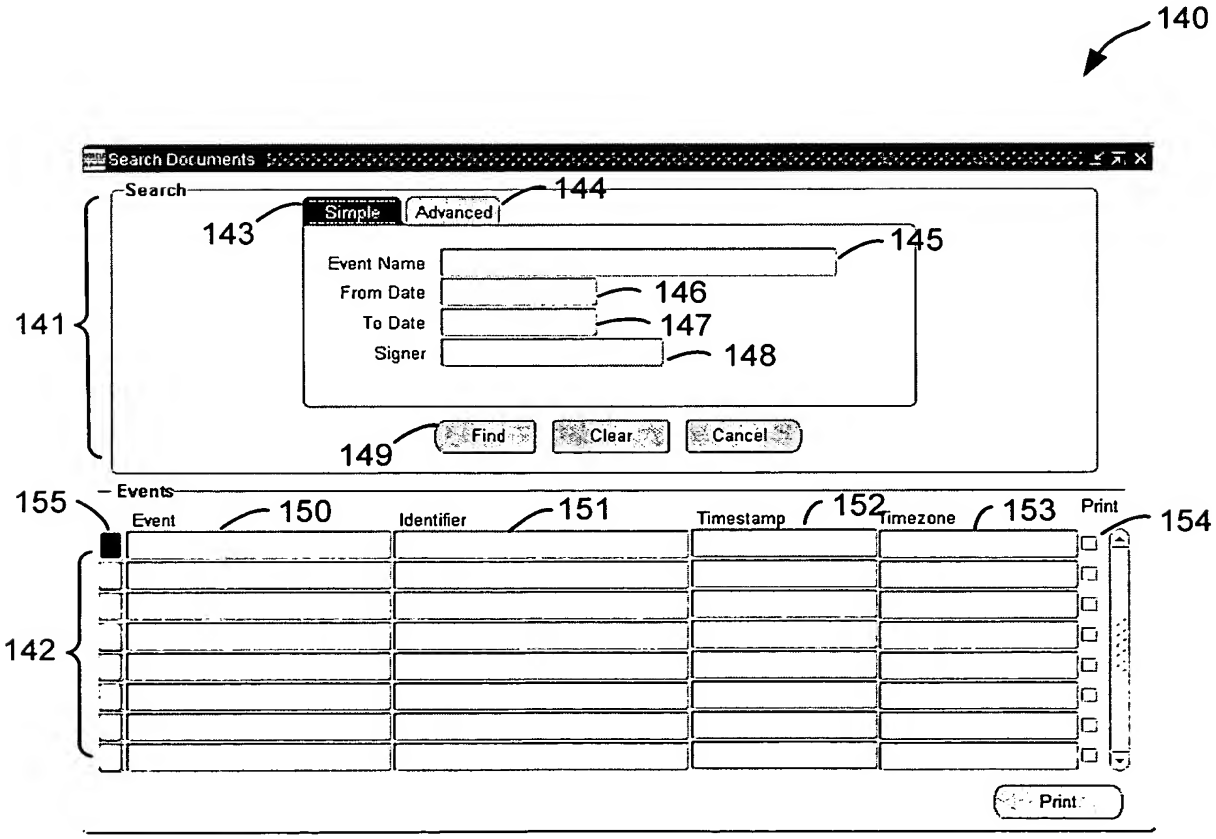
140
Search Documents
Search
Simple
Advanced
143
144
145
Event Name
From Date
146
To Date
147
Signer
148
141
149
Find
Clear
Cancel
155
Events
Event
150
Identifier
151
Timestamp
152
Timezone
153
Print
154
142
Print

Fig. 13

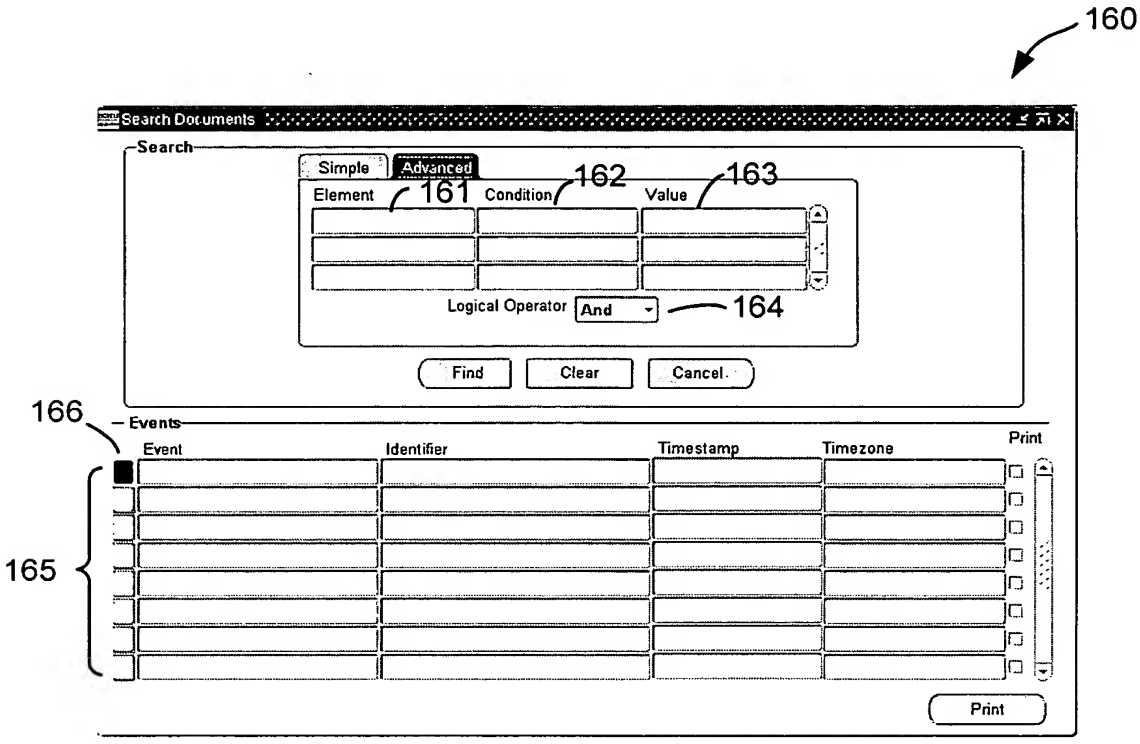
160
Search Documents
Search
Simple
Advanced
Element
161
Condition
162
Value
163
Logical Operator
And
164
Find
Clear
Cancel
166
Events
Event
Identifier
Timestamp
Timezone
Print
165
Print

Fig. 14

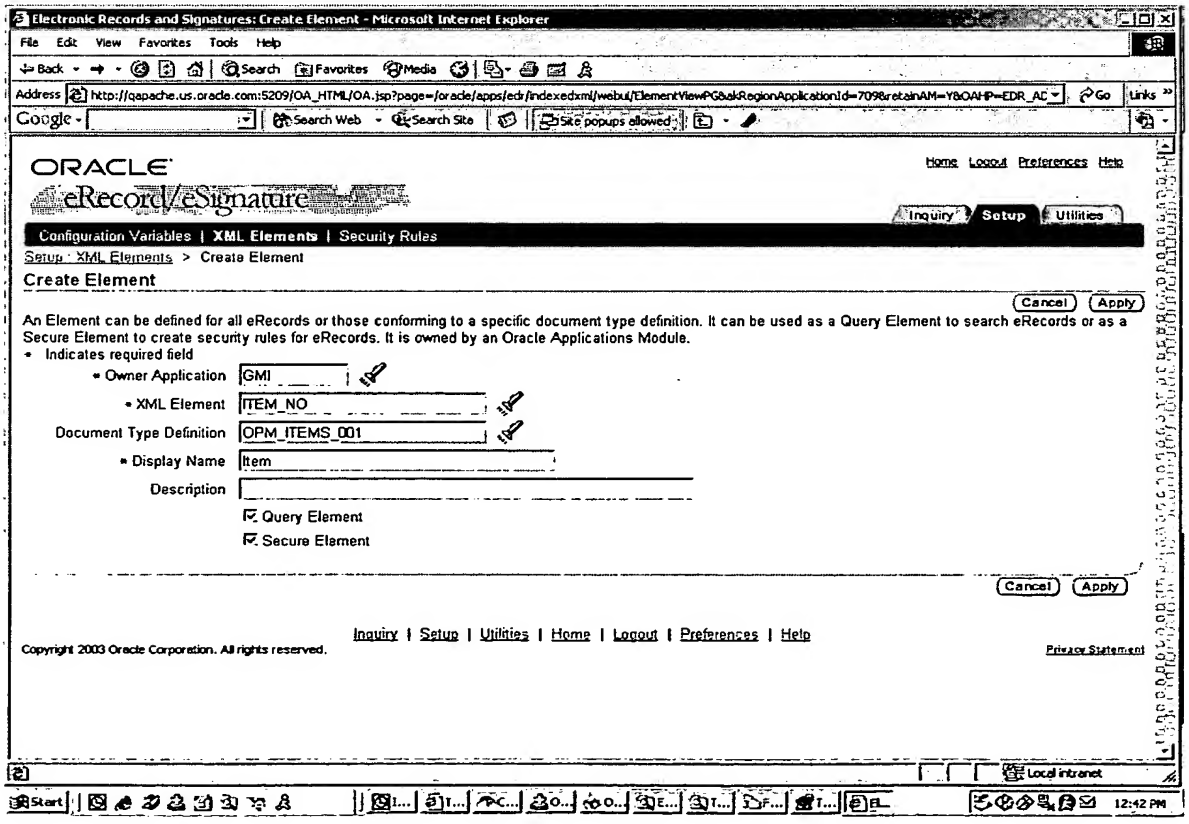
Electronic Records and Signatures: Create Element - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Setup : XML Elements > Create Element
Create Element
Cancel Apply
An Element can be defined for all eRecords or those conforming to a specific document type definition. It can be used as a Query Element to search eRecords or as a Secure Element to create security rules for eRecords. It is owned by an Oracle Applications Module.
* Indicates required field
* Owner Application GMI
* XML Element ITEM_NO
Document Type Definition OPM_ITEMS_001
* Display Name Item
Description
Query Element
Secure Element
Cancel Apply
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 15

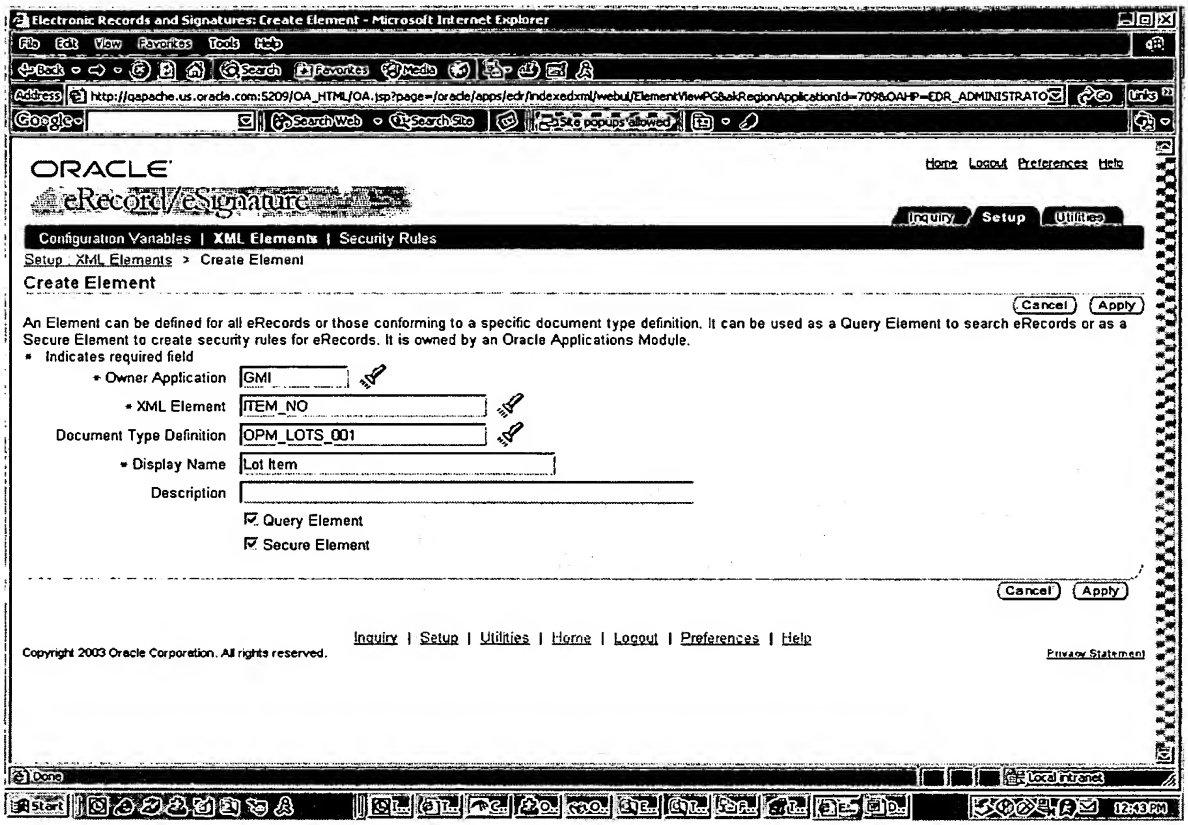
Electronic Records and Signatures: Create Element - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Setup XML Elements > Create Element
Create Element
Cancel Apply
An Element can be defined for all eRecords or those conforming to a specific document type definition. It can be used as a Query Element to search eRecords or as a Secure Element to create security rules for eRecords. It is owned by an Oracle Applications Module.
* Indicates required field
* Owner Application GMI
* XML Element ITEM_NO
Document Type Definition OPM_LOTS_001
* Display Name Lot Item
Description
Query Element
Secure Element
Cancel Apply
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 16

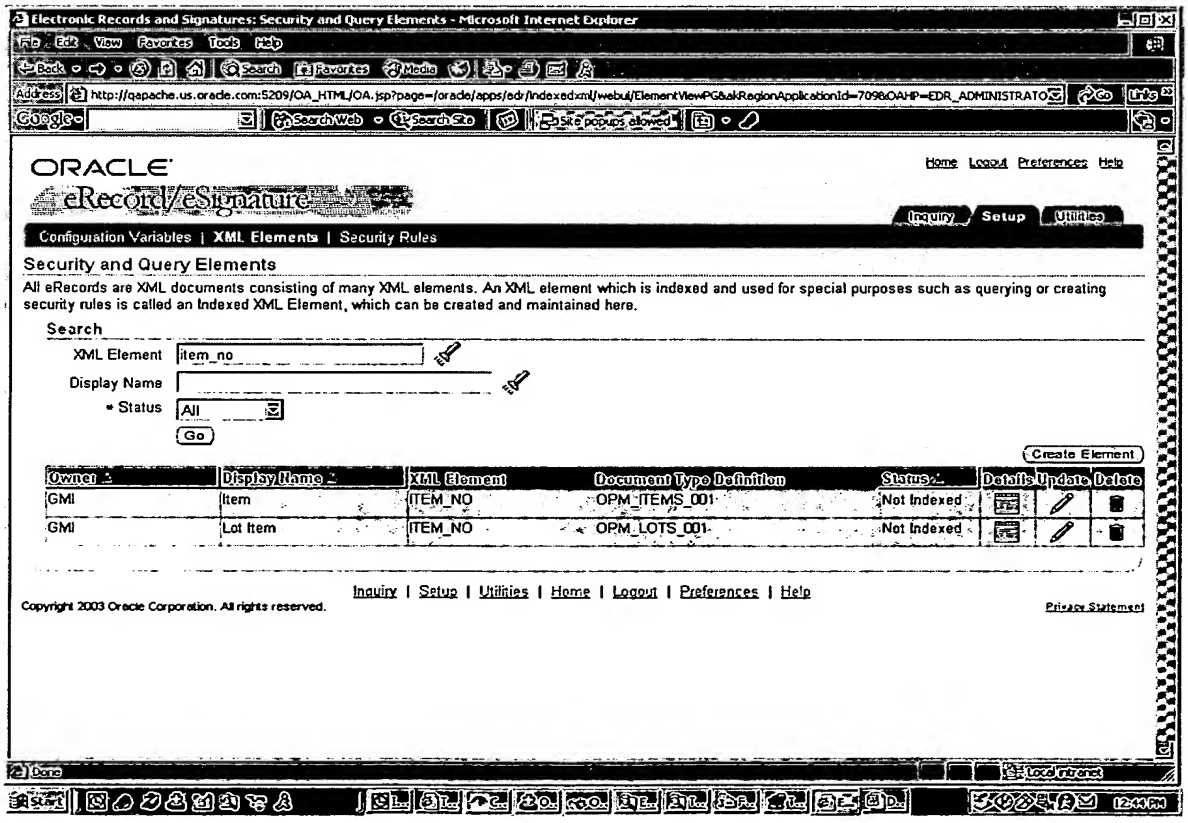
Electronic Records and Signatures: Security and Query Elements - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Security and Query Elements
All eRecords are XML documents consisting of many XML elements. An XML element which is indexed and used for special purposes such as querying or creating security rules is called an Indexed XML Element, which can be created and maintained here.
Search
XML Element item_no
Display Name
* Status All
Go
Create Element
Owner | Display Name | XML Element | Document Type Definition | Status | Details | Update | Delete
GMI | Item | ITEM_NO | OPM_ITEMS_001 | Not Indexed
GMI | Lot Item | ITEM_NO | OPM_LOTS_001 | Not Indexed
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 17

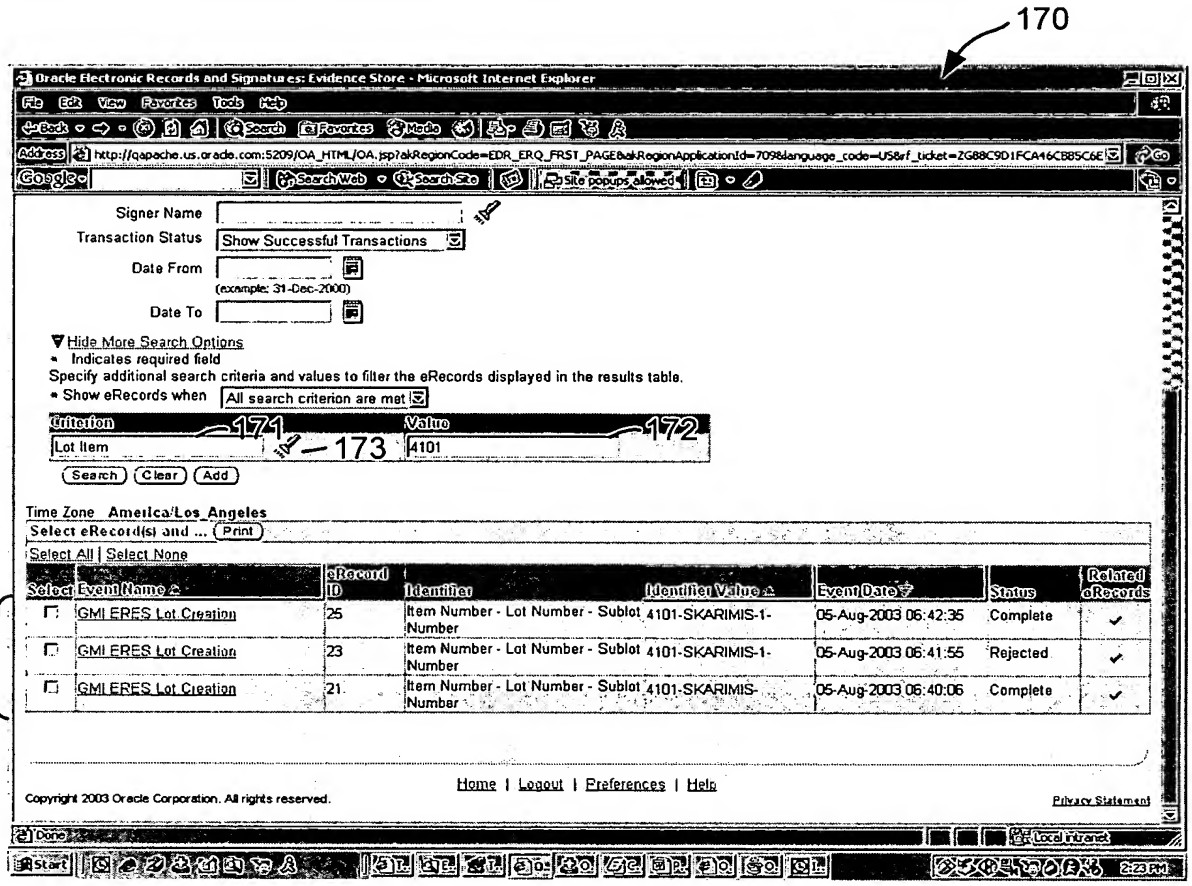
170
Oracle Electronic Records and Signatures: Evidence Store - Microsoft Internet Explorer
Signer Name
Transaction Status
Show Successful Transactions
Date From
(example: 31-Dec-2000)
Date To
Hide More Search Options
* Indicates required field
Specify additional search criteria and values to filter the eRecords displayed in the results table.
* Show eRecords when
All search criterion are met
Criterion
Value
171
172
173
Lot Item
4101
Search
Clear
Add
Time Zone America/Los_Angeles
Select eRecord(s) and ...
Print
Select All | Select None
Select
Event Name
eRecord ID
Identifier
Identifier Value
Event Date
Status
Related eRecords
GMI ERES Lot Creation
25
Item Number - Lot Number - Sublot Number
4101-SKARIMIS-1-
05-Aug-2003 06:42:35
Complete
GMI ERES Lot Creation
23
Item Number - Lot Number - Sublot Number
4101-SKARIMIS-1-
05-Aug-2003 06:41:55
Rejected
GMI ERES Lot Creation
21
Item Number - Lot Number - Sublot Number
4101-SKARIMIS-
05-Aug-2003 06:40:06
Complete
174
Home | Logout | Preferences | Help
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Fig. 18

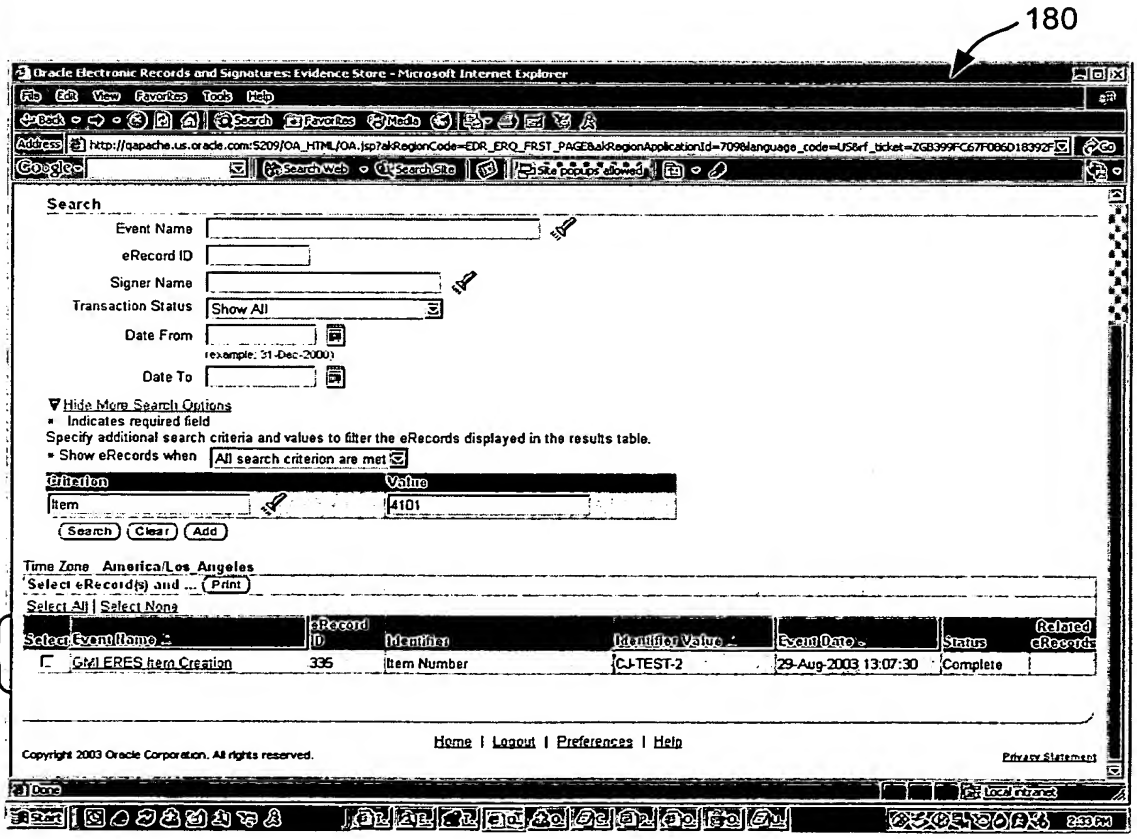
180
Oracle Electronic Records and Signatures: Evidence Store - Microsoft Internet Explorer
Search
Event Name
eRecord ID
Signer Name
Transaction Status
Show All
Date From
(example: 31-Dec-2000)
Date To
Hide More Search Options
* Indicates required field
Specify additional search criteria and values to filter the eRecords displayed in the results table.
* Show eRecords when
All search criterion are met
Criterion
Value
Item
4101
Search
Clear
Add
Time Zone America/Los_Angeles
Select eRecord(s) and ...
Print
Select All | Select None
Select
Event Name
eRecord ID
Identifier
Identifier Value
Event Date
Status
Related eRecords
GMI ERES Item Creation
335
Item Number
CJ-TEST-2
29-Aug-2003 13:07:30
Complete
184
Home | Logout | Preferences | Help
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Fig. 19

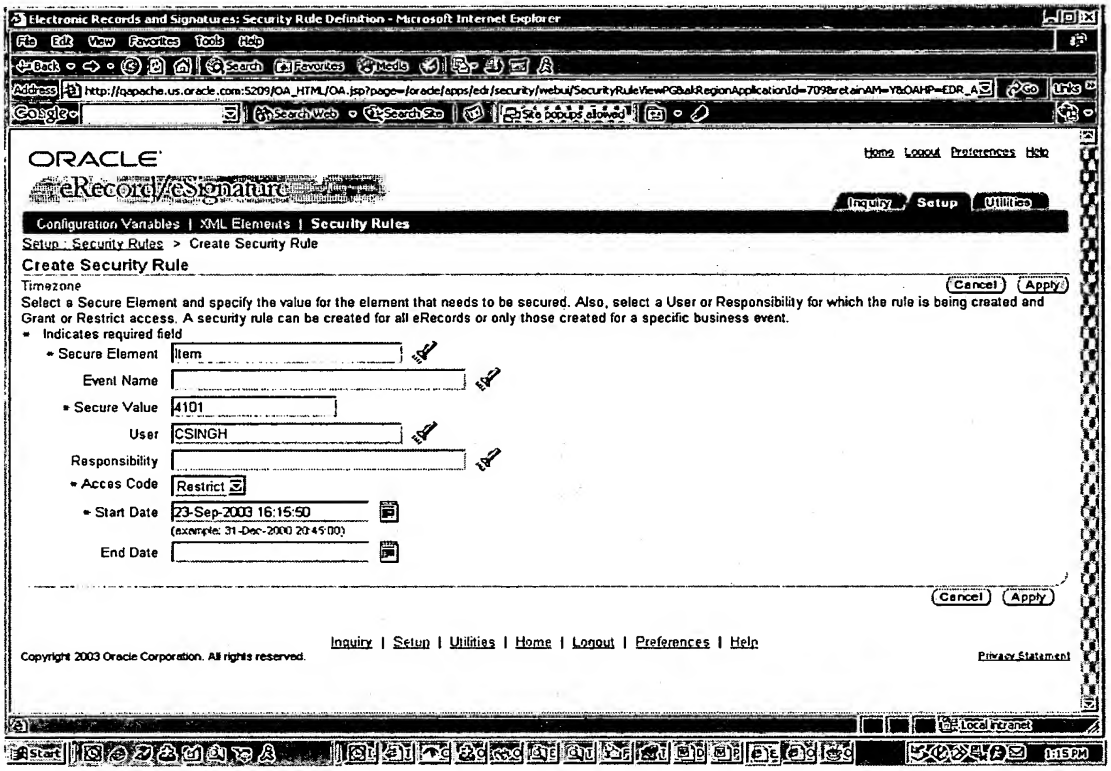
Electronic Records and Signatures: Security Rule Definition - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Inquiry Setup Utilities
Configuration Variables | XML Elements | Security Rules
Setup : Security Rules > Create Security Rule
Create Security Rule
Timezone
Cancel Apply
Select a Secure Element and specify the value for the element that needs to be secured. Also, select a User or Responsibility for which the rule is being created and Grant or Restrict access. A security rule can be created for all eRecords or only those created for a specific business event.
* Indicates required field
* Secure Element Item
Event Name
* Secure Value 4101
User CSINGH
Responsibility
* Access Code Restrict
* Start Date 23-Sep-2003 16:15:50
(example: 31-Dec-2000 20:45:00)
End Date
Cancel Apply
Inquiry | Setup | Utilities | Home | Logout | Preferences | Help
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Fig. 20

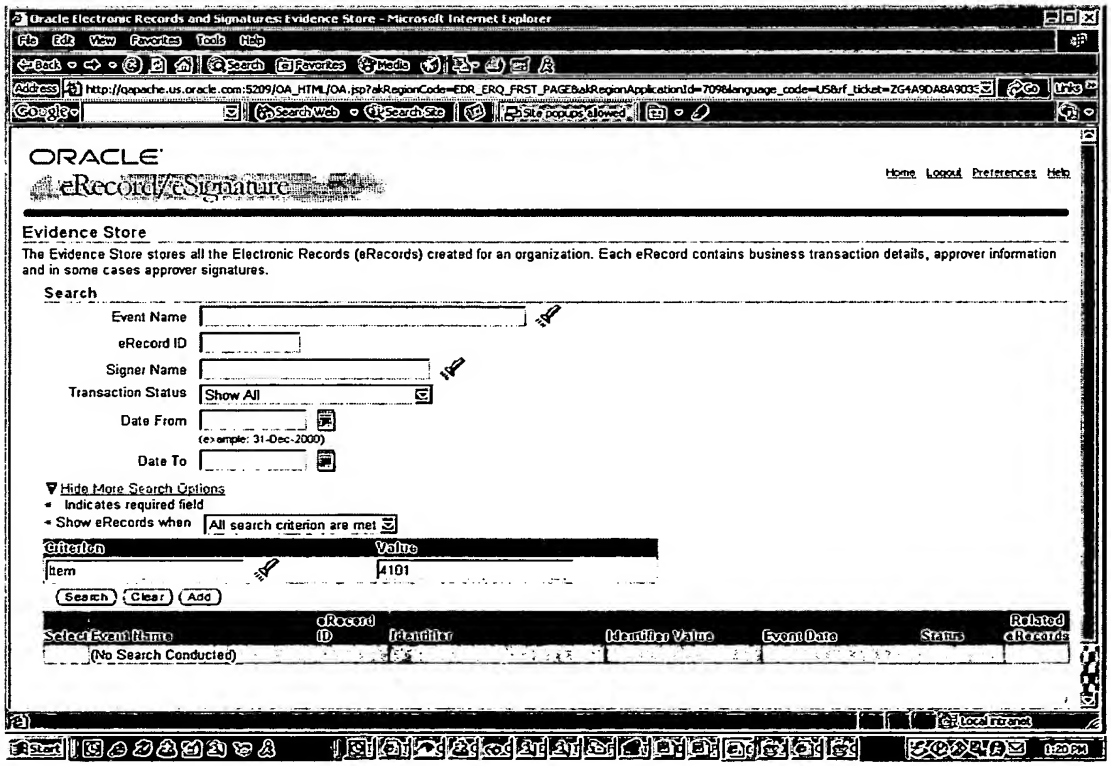
Oracle Electronic Records and Signatures: Evidence Store - Microsoft Internet Explorer
ORACLE
eRecord/eSignature
Home Logout Preferences Help
Evidence Store
The Evidence Store stores all the Electronic Records (eRecords) created for an organization. Each eRecord contains business transaction details, approver information and in some cases approver signatures.
Search
Event Name
eRecord ID
Signer Name
Transaction Status Show All
Date From
(example: 31-Dec-2000)
Date To
Hide More Search Options
* Indicates required field
* Show eRecords when All search criterion are met
Criterion Value
Item 4101
Search Clear Add
Select Event Name eRecord ID Identifier Identifier Value Event Date Status Related eRecords
(No Search Conducted)

Fig. 21